



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,458	10/16/2006	Christer Krebs	9062A-000149/US/NP	8026
28997 7590 07/22/2010 HARNESS, DICKEY, & PIERCE, P.L.C 7700 Bonhomme, Suite 400 ST. LOUIS, MO 63105			EXAMINER TRAN, PABLO N	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 07/22/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,458	<b>Applicant(s)</b> KREBS ET AL.	
	<b>Examiner</b> Pablo N. Tran	<b>Art Unit</b> 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Remarks**

1. The indicated allowability of claims 1-4 is withdrawn in view of the newly discovered reference(s) to Fujii (JP 06314982) Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1, 6-12, and 17-20 recites the limitation “the radiating element”. There is insufficient antecedent basis for this limitation in the claim.
4. Claims 2 and 4 recites the limitation “the impedance”. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Art Unit: 2618

6. Claims 1-4 and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Fujii (JP06314982).

As per claims 1 and 14, Fujii discloses an antenna device (fig. 1/no. 1) for a portable radio communication device (fig. 1/no. 6) adapted for receiving radio signals, said antenna device comprising an internal radiating element (fig. 1/no. 3) comprising at least one feeding portion connected to a receiver circuit the radiating element comprising an electrical impedance (fig. 1/no. 2, 4-5) that is controllable in dependence on the desired frequency range of the received signals, wherein the at least one feeding portion is connected to a feeding input on the receiver circuit, and wherein a control input of the electrical impedance is connected to an output on the receiver circuit intended for the control of the VCO resonance frequency (fig. 1/no. 7) of the receiver circuit (fig.1, abstract).

As per claim 2, Fujii discloses the impedance is a capacitive impedance (fig. 1/no. 2, 4-5).

As per claim 3, Fujii discloses the electrical impedance is a varactor diode (fig. 1/no. 2, 4-5).

As per 4, Fujii discloses the impedance is an inductive impedance (fig. 1/no. 2, 4-5).

***Claim Rejections - 35 USC § 103***

Art Unit: 2618

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-12 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii (JP06314982).

As per claims 5 and 15-16, Fujii does not explicitly disclose the radio signals for which the antenna device is adapted have a frequency below 110 MHz, preferably between 76 and 110 MHz, and even more preferably between 88 and 108 MHz. However, such antenna device adapted for transmission of signals in such a frequencies range as claimed is well such is notoriously well known in the art that the examiner takes Official Notice of such. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Fujii to incorporate such an antenna device adapted for transmission of signals in the claimed frequencies range in order to provide the radio communication device adapted for transmission signals in the required frequency range.

As per claims 6-7, 10, and 17-18, Fujii does not explicitly disclose the radiating element is a loop, is arranged in several turns, or arranged as a spiral. However, such an antenna arrangement as claimed is well such is notoriously well known in the art that the examiner takes Official Notice of such. Therefore, it would have been obvious to

Art Unit: 2618

one of ordinary skill in the art at the time of invention for Fujii to incorporate such an antenna arrangement in order to reduce cost and/or space.

As per claims 8-9, 11-12, and 19-20, Fujii does not explicitly disclose the radiating element is arranged on a battery package, is provided outside of the edge of a PCB provided in the radio communication device, or provided above a dielectric material. However, such an antenna arrangement as claimed is well known in the art that the examiner takes Official Notice of such. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Fujii to incorporate such an antenna arrangement in order to reduce cost and/or space.

9. Claim 13 is rejected under 35 U.S.C. 102(a) as being anticipated by Fujii (JP06314982) in view of Oda et al. (hereinafter "Oda", US Pat No 4,625,212)

As per claim 13, Fujii does not specifically disclose the antenna device comprising at least two orthogonal radiating elements. Oda discloses an antenna arrangement (fig. 9, col. 6/ln. 51-col. 7/ln. 7). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Fujii to incorporate such an antenna arrangement, as taught by Oda, in order to accomplish high antenna gain.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner's normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the

Art Unit: 2618

examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for Published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-directauspto.gov>. Should You have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

July 19, 2010

/Pablo N Tran/

Primary Examiner, Art Unit 2618